

REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Thus, claim 1 has been amended to recite that the heat treatment is performed by direct steam blowing heating at 100-160°C for 1 second to 60 seconds, based on the disclosure at page 11, lines 20-22 of the specification.

Claim 6 has been cancelled.

New claims 9 and 10 have been added to the application. These new claims correspond to original claims 7 and 8, respectively, with the production of the soybean protein as recited in amended claim 1 being incorporated into claim 9.

Applicants take the position that these amendments should be entered, even though they are being presented after final rejection, since the effect of the amendments is to clearly place the application in condition for allowance, as will be noted below.

The Examiner has rejected claim 1 under the first paragraph of 35 U.S.C. § 112 as failing to comply with the written description requirement. Applicants disagree with the Examiner's position in this regard, considering the disclosure at page 11, lines 18-22 of the specification. Nevertheless, claim 1 has been amended to recite the time range of 1 second to 60 seconds, which is specifically disclosed in this portion of the disclosure on page 11. Accordingly, the rejection of claim 1 under the first paragraph of 35 U.S.C. § 112 has been rendered moot.

The patentability of the presently claimed invention after entry of the foregoing amendments, over the disclosures of the references relied upon by the Examiner in rejecting the claims, will be apparent upon consideration of the following remarks.

Thus, the rejection of claim 1 (claim 6 having been cancelled) under 35 U.S.C. § 102(b) as being anticipated by Motoki et al. (US '956; hereinafter R3) is respectfully traversed.

R3 describes heating conditions of elevating to 100°C over 5 minutes and then keeping the temperature for 3 to 5 minutes.

On the other hand, heating in the present invention is at 100 to 160°C for 1 second to 60 seconds. Therefore, the present invention is different from R3 in the heating conditions.

In addition, an objective of heating before transglutaminase treatment in the present invention is to provide a soybean protein having satisfactory gelation ability and satisfactory emulsification ability (page 7, lines 19-22 of the specification).

On the other hand, an objective of heating before transglutaminase treatment disclosed in R3 is to extract soybean milk from soybean (column 12, lines 10-16). The present invention is thus also different from R3 in the objective of heating.

Therefore, the present invention is not anticipated by R3.

The rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over JP 06-209716 (machine translation; hereinafter R1) in view of Schaefer et al. (US '284; hereinafter R2) is respectfully traversed.

The present invention is directed to a method for producing a soybean protein. R1 discloses a method for producing a soybean casein crosslinked mixed protein, which can never be considered a soybean protein because casein is crosslinked. Although the Examiner points out that the present claim is an open claim, these methods are clearly different from each other because the obtained proteins are clearly different.

Further, according to the process of the present invention, it is possible to produce a soybean protein having satisfactory gelation ability and satisfactory emulsification ability (page 7, lines 19-22 of the specification). The present invention ensures that when the soybean protein of the present invention is used in processed meat foods, including sausage, it exerts both its gelation ability and its emulsification ability, so that the processed meat foods can have a firm texture which is closer to that of real meat and a high-quality feel (page 8, lines 7-12 of the specification). These effects are achieved by heating a soybean protein solution or soybean protein slurry under specific conditions before transglutaminase treatment (page 11, line 18-page 12, line 18 of the specification).

R1 and R2 neither teach nor suggest improvement of gelation ability and emulsification ability of the cross-linked soybean protein. Moreover, R1 and R2 neither teach nor suggest that these effects are achieved by direct steam blowing heating at 100 to 160°C for 1 second to 60 seconds before the treatment with transglutaminase. Therefore, even if R1 and R2 are combined, a skilled person in the art would not reach the present invention.

Thus, the present invention is not obvious from R1 and R2.

In addition, new claims 9 and 10 relate to a method for producing a processed meat food, considering that the foregoing effects are especially useful in manufacturing the processed meat food, whereby these effects of the present invention are embodied in the claims.

Therefore, in view of the foregoing amendments and remarks, it is submitted that each of the grounds of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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